

Title (en)

CONTOUR DETECTING DEVICE, CONTOUR DETECTING METHOD, AND ITS PROGRAM

Title (de)

ERKENNUNGSVORRICHTUNG, ERKENNUNGSVERFAHREN UND PROGRAMM ZUR KONTURENERKENNUNG

Title (fr)

DISPOSITIF DE DÉTECTION DE CONTOUR, PROCÉDÉ DE DÉTECTION DE CONTOUR ET SON PROGRAMME

Publication

EP 2123237 A1 20091125 (EN)

Application

EP 08721784 A 20080311

Priority

- JP 2008054368 W 20080311
- JP 2007069227 A 20070316

Abstract (en)

An outline detection apparatus which detects an outline of a tooth in a dental image of which are taken at least the tooth, a gum, and a background showing an inside of a mouth other than the tooth and the gum, including: a rectangular range specification device for estimating a central portion of the dental image as a tooth, estimating a position in a predetermined range in an upper or lower portion of the dental image as a gum according to a specification of a dental image on a maxillary area or a mandibular area, estimating a position in a predetermined range in the lower portion as the background if the position estimated as the gum is in the upper portion of the dental image, or estimating a position in a predetermined range in the upper portion as the background if the position estimated as the gum is in the lower portion of the dental image, and specifying rectangular ranges with predetermined pixels in a part of the positions estimated as the tooth, the gum, and the background; and a site estimation device for acquiring from data on the dental image a characteristic quantity based on color information of the respective pixels in the rectangular ranges, finding a classification vector which maximizes the Fischer ratio based on the acquired characteristic quantity, and estimating which of the tooth range, the gum range, and the background range, pixels in the dental image other than the respective pixels in the rectangular ranges are positioned in according to comparison between a predetermined threshold value and an inner product between the classification vector and a pixel value vector based on color information on pixels in the dental image other than the respective pixels in the rectangular ranges.

IPC 8 full level

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CPC (source: EP US)

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Citation (search report)

See references of WO 2008126560A1

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